**CITY OF COLUMBIA, MISSOURI**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**STORMWATER MANAGEMENT-DETENTION CHECKLIST**

_____ Inflow / Outflow Hydrographs of all drainage areas for the 1, 2, 10 and 100 year design storms.
_____ Post development outlet flows are to be less than pre-development flows in the 1, 2, 10 and 100 year, 24 hour design storms.
- _____ Pre development CN = 78. Ensure proper Tc is used.
- _____ Redevelopment projects: If det. reduction is applicable, adjust CN appropriately.

_____ Rate of inflow to the storage facility and all hydrologic considerations must include all tributary areas to the detention basin under existing conditions and fully developed conditions.
_____ Stage-Storage curve provided
_____ Stage-outflow curve provided
_____ Required detention parameters provided in calcs or on plans:
- _____ Total site area, acres
- _____ Total area to basin, acres
- _____ Off-site area to basin, acres
- _____ Percent impervious of total site, Pre-developed, %
- _____ Percent impervious of total site, Post-developed, %
- _____ Percent impervious of area to basin, Post-developed, %
- _____ Percent impervious of off-site area to basin, Post-developed, %
- _____ Storage volume at overflow, cf
- _____ Water elevation at 100-year storm, cfs
- _____ Orifice type and area, sf

_____ All designs shall include an emergency or overflow spillway which would pass excess flows greater than those of the 25 year design storms and overflows caused by clogging of the principal outlets. The emergency spillway shall be designed to safely pass the flow resulting from a 100-year frequency, 24-hour duration storm event.
_____ Erosion control provided on the emergency or overflow spillway.
_____ Primary discharge is into an acceptable stormwater conveyance facility.
_____ Detention structures which are proposed to be located within a designated 100-year flood plain shall not be permitted.
_____ No detention storage facility will be permitted within public street right-of-way without specific written approval from the Director of Public Works.
_____ Orifice Design
- _____ Orifice plate is stainless steel, aluminum, or ASTM A-123 galvanized with stainless steel fasteners, and sealant
- _____ Accessible trash rack on orifices smaller than 8” diameter
- _____ Outlet orifice not impaired by tailwater
- _____ Orifice plate can fit though access opening for future removal/replacement

_____ Underground Storage

_____ Vented

_____ Adequate access for maintenance/ cleaning of vault and orifice

_____ Bearing capacity of subgrade specified.

_____ Depths of stone above and below chambers specified.

_____Available storage volume calculated (Stormtech "Cumulative Storage Volume" spreadsheet, or equivalent.)

_____ Available storage volume > required storage for detention (typ. on 100-year hydrograph routed through the chamber system))

_____ Cross section of emergency or overflow spillway including 100year storm design capacity, flowline elevation, 100 year design storm WSE, and top of berm elevation

_____ Cross section of dam including any compaction requirements

_____ Anti-seep collars – wet pond only.